ABSTRACT

The patent discloses a signal processing technique for determining the fast and slow shear wave polarizations, and their orientation, for acoustic waves in an anisotropic earth formation. The signal processing method decomposes composite received waveforms a number of times using a number of different strike angles. The decomposed signals are used to create estimated source signals. The estimated source signals are compared in some way to obtain an objective function. Locations in a plot where the objective function reaches minimum values are indicative of the acoustic velocity of the fast and slow polarizations within the formation.